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May 24, 2010

Doug Ito, Manager
SIP Local Government Strategies
Air Resources Board
P.O. Box 2815
Sacramento CA 95812

Re: Factors impacting the establishment of Greenhouse Gas Reduction Targets for the
SBCAG MPO Region

Dear Mr. Ito:

SBCAG has previously provided staff of the Air Resources Board with information from our adopted Regional Transportation Plan. At this time, the SBCAG Board has also authorized staff to share other pertinent information related to establishing Greenhouse Gas reduction targets for our region. SBCAG believes these factors will impact the GHG emission reduction measures considered in our region's SCS and we request that ARB take them into account when establishing our region's target. The factors include:

1. Updated population, employment, and household forecasts;
2. Summary of conditions impacting short term growth;
3. Major institutions beyond SBCAG's purview;

In addition, we would like to share with you the results of an analysis of possible greenhouse gas reduction measures that SBCAG staff has evaluated, in collaboration with your staff and the staff of other MPOs over the past several months. This quantitative evaluation of the impacts of alternative planning scenarios for SB375 GHG emissions reduction target setting includes measures related to:

- a. Transportation Demand Management;
- b. Transportation System Management;
- c. Transit System improvements;
- d. Land use; and,
- e. Pricing

These factors are outlined below.

Updated population, employment, and household forecasts

In 2007 SBCAG adopted an update to our Regional Growth Forecast. Unfortunately, the update was not in time to be incorporated into the update of our regional travel model. Consequently this updated growth forecast was not used in our most recent 2008 RTP, adopted 2009.

Member Agencies

Buellton ▣ Carpinteria ▣ Goleta ▣ Guadalupe ▣ Lompoc ▣ Santa Barbara ▣ Santa Maria ▣ Solvang ▣ Santa Barbara County

Therefore, the growth forecasts in our adopted RTP overestimate the amount of growth the region anticipates. The Table below compares the 2002 RGF forecasts used in our RTP with the more up-to-date forecasts. As the attached table indicates the current forecast (prepared prior to the 2008-09 recession) projects less growth than the prior forecast. For the year 2020 the current forecast projects 10 percent less population, 4 percent less households, and 7 percent less jobs for 2020 than the 2002 RGF. The 2030 forecasts show 8 percent less population, 1 percent less households, and 10 percent less jobs. SBCAG has recently incorporated these revised forecasts into our regional travel model. A comparison of the forecasts is summarized in Table 2. SBCAG used Forecast 2007 and the updated travel model in assessing the GHG reduction scenarios.

Table 2: Comparison of Previous 2002 with Current 2007 Regional Growth Forecasts

	Population		Households		Employment	
	2020	2030	2020	2030	2020	2030
Previous 2002 Forecast	505,000	521,000	164,641	166,671	231,000	257,000
Current 2007 Forecast	459,600	481,400	157,648	164,422	216,000	233,000
% Difference	-9.8	-8.2	-4.4	-1.3	-6.9	-10.3

Table 2 summarizes the differences in socioeconomic and travel forecast parameters between the 2002 and 2007 SBCAG Regional Growth Forecast.

Table 2: Comparison of 2002 and 2007 Regional Growth Forecasts

	2009 RTP 1/		New Forecast 2/		
	2000BC	2030 Plnd	2005	2020Prog	2035Plnd
Population	399,343	523,529	417,500	459,600	487,000
Household	136,620	167,031	143,138	157,648	165,970
Employment	200,332	278,522	188,051	216,001	241,001
Total Person Trips	1,900,788	2,569,152	1,996,029	2,360,111	2,515,428
Total Veh Trips	1,271,900	1,703,400	1,331,802	1,560,118	1,663,729
Total VMT	9,423,000	14,862,700	9,605,095	10,934,981	11,442,169
TOTAL VHT	207,473	329,758	217,955	259,660	257,583

1/ Based on 2002 RGF.

2/ Based on 2007 RGF.

Summary of conditions impacting short term growth

Based on recent (2010) data from the California Economic Forecast, Real Estate Outlook, local economic indicators show a slowdown in activity. According to the report commercial vacancy rates are higher as a result of ongoing weakness in the labor market in both the retail and office sectors. Office vacancy rates have increased in the south coast of Santa Barbara County from a low of 3% in the winter of 2008 to a high of over 8% in 2010. Retail vacancy rates increased from 1.3% in winter 2008 to 2.5% in 2010. Lease rates have also declined falling up to 33% in the south coast. There is virtually no new building in the county. Many projects are on hold until labor and home sales market conditions improve. New residential housing units countywide have dropped from 723 in 2007 to 213 in 2009. The number of residential units in foreclosure

peaked in July of 2008 totaling 666 countywide then declined 56% by the end of the year. Since then the number of units in foreclosure have remained mostly stable with an monthly average of 200–360. The countywide median home selling value is off its peak in 2007 of over \$575,000 to the current median of \$292,000.

The local labor markets in Santa Barbara County are still losing workers. According to recent employment statistics from the California Employment Development Department the current unemployment rate is high at 9.9% compared a low of 5 percent in 2008. There is no evidence that job creation will begin anytime soon, however the rate of economic contraction has improved, i.e. declined. The countywide non-farm job growth has been negative since the beginning of 2008 but continues to decline at a lower rate as of February 2010.

The countywide employment forecast contained in the current SBCAG Regional Growth Forecast 2007 is based, in part, on the Caltrans long-term economic forecasts. According to the updated forecasts recently released by Caltrans and produced by the California Economic Forecast Project, nearly 3,400 wage and salary jobs were lost in 2009, a decline of -1.8 percent. Non-farm employment declined at a slightly higher rate of -1.9 percent.

The principal employment sectors in Santa Barbara County are the public sector, retail trade, and services. Last year the only sectors that showed growth in the county were government and education and health services. Employment in the farm sector, which accounts for 9 percent of total employment, only declined one percent in 2009. However, the total value of crop production exceeded \$1.1 billion in 2008, on the strength of strawberries, broccoli, and wine grapes.

According to the report employment growth will remain modest in Santa Barbara County over the next five years. The report forecasts a year of stagnant job growth in 2010. For the year a decline of 480 jobs or 0.3 percent is forecast. By 2011 recovery is underway, with employment increasing by 0.8 percent. The professional services, government, leisure services, retail trade, construction, education and health services, and farm sectors each add at least 1,200 jobs between 2010 and 2015. Together they account for 98 percent of net job creation. No other sector is expected to add more than 350 jobs from 2010 to 2015.

The Caltrans report also suggests population growth will remain modest in the county. Annual growth in the 2010 to 2015 period averages 1.0 percent per year. Net migration for the entire county is expected to remain positive over the medium term forecast horizon. The south county will likely have negative net migration, but that will be offset by gains in the north county. From 2010 to 2015, there is an average of 1,100 net migrants entering the county per year.

Table 3 compares employment forecasts from the current SBCAG RGF 2007 with the newly released Caltrans report. The Caltrans forecasts are consistently lower from 5 to 7.5 percent for each forecast period suggesting the SBCAG forecasts are too aggressive given the impact of the recession.

Table 3: Employment Forecasts, SBCAG 2007 Regional Growth Forecast and Caltrans

Forecast Source	Wage and Salary Employment					
	2010	2015	2020	2025	2030	2035
SBCAG 2007 Forecast	200,000	209,000	216,000	225,000	233,000	241,000
Caltrans 2010 Forecast	185,900	198,000	208,900	219,500	229,300	237,400
% Difference	-7.5	-5.5	-3.4	-2.5	-1.6	-1.5

The UC Santa Barbara Economic Forecast, also recently released, paints a similar economic picture. According to the report, construction has been the hardest hit industry in the region and those construction jobs lost are not forecast to return to 2006 levels through 2013. Retail trade employment experienced the third largest employment decline in the county, after construction and hospitality, losing more than 2,000 jobs, or 10.2 percent, from the peak. Retail job growth will continue to be slow for the foreseeable future, with employment levels not returning to pre-recession levels until the end of 2013. Santa Barbara County's professional and business services industry will also take some time to fully recover and since 2007, this sector lost almost 1,500 jobs.

Major Institutions beyond SBCAG's Influence

There are two major institutions in Santa Barbara County that are beyond SBCAG's immediate influence. These include Vandenberg Air Force Base, a federal institution in north Santa Barbara County and the University of California at Santa Barbara, a state institution in south Santa Barbara County. Other institutions or employers beyond SBCAG's immediate influence but exhibiting relatively less of an overall effect on growth include the Chumash Reservation which is a large employer in the Santa Ynez Valley and the Federal Correctional Facility located within the City of Lompoc.

Vandenberg Air Force Base (VAFB)

VAFB, located to the west of Lompoc along the west coast of the County, is a large military installation that has surprisingly relatively little "military" activity. However, Vandenberg Air Force Base (VAFB), the Air Force Space Command organization is responsible for all Department of Defense space and missile launch activities on the West Coast and all US satellites destined for near polar orbit, is located in northern Santa Barbara County. With no fixed base air wing, airport operations are primarily limited to helicopter training and rescue operations, and the occasional fixed wing aircraft training mission. However, the base includes a military airfield with a runway of 10,500 feet capable of serving various military jets and long-range transport aircraft. VAFB is located entirely within the County, comprising 5.6% of the County's total land and 33% of its coastline.

VAFB is a source of significant traffic, attracting contract workers on a daily basis from the Lompoc and Santa Maria Valleys. Average daily vehicle traffic at the main gate and Highway 1 and the Lompoc-Casmalia Rd both approach 15,000 ADT.

Forecasts provided by VAFB show significant growth in government (space and ballistic) launches, fluctuating from 14 to 18 launches per year and averaging around 15 between 1998 and 2003. Commercial launch activity is projected to grow more dramatically, from 9 launches per year to nearly 30 in the same period. For 2005, 22 launches were scheduled—the most launches since 1985 and twice what occurred in 2004. Based on this and other activity the SBCAG regional forecast assumes Vandenberg AFB will continue in its importance as new commercial space ventures are implemented in the early part of the forecast.

The dominant role Vandenberg Air Force Base plays in North County was displayed in the mid 1980's during the employment buildup for the space shuttle program and the resulting sharp decline after the Challenger disaster. A continuing, but less dominant, role is anticipated to result in new manufacturing and construction employment as launch facilities are used for commercial applications. A 166 million dollar space center has been proposed, to be built on 66 acres just outside Vandenberg's main gate. The project will include a permanent launch viewing site, visitor center, educational complex, a conference center and an IMAX theater.

Vandenberg AFB is also expected to be the recipient of additional personnel and programs as a result of continued nationwide realignments of defense programs that began in the early 1990's. VAFB may be the recipient of additional defense programs such as the Airborne Laser Program that could add 500 additional personnel for a few years after 2005. The long-term potential for commercial space launch activities at Vandenberg AFB is still viable. A reusable Launch Vehicle is also being developed that may use the Vandenberg AFB's airfield although other sites are being considered. Vandenberg successfully launched a Minotaur II rocket from Space Launch Complex-8 on March 14, 2006. The Minotaur rocket carried six low-earth orbiting, micro-satellites. Vandenberg AFB will continue in its importance as new commercial space ventures are implemented. At Vandenberg, as of 2006, there are 3,150 military employees, 1,090 civilian government and 4,680 contractor employees. Vandenberg will increase its housing by approximately 600 units. There are approximately 468 military group quarters units on the base housing airman and other military personnel.

University of California, Santa Barbara (UCSB)

Comprising slightly over 1,000 acres UCSB is located on a spectacular coastal setting in the unincorporated area of Santa Barbara County, adjacent to the City of Goleta. UCSB enrolls 22,850 students; about 3,050 of them are at the graduate level. There are and approximately 1,200 faculty and 2,800 staff.

UCSB and other large institutions present some forecasting challenges. The population model used in the SBCAG growth forecast contains a separate assessment of the "fixed aged" population residing at institutions such as the University of California, Santa Barbara (UCSB). This institution generally cycles people in-and-out of school on a rotating basis so that the young student population does not generally age, as does the population that stays in the area for a longer period. The "group quarters" population is also forecast separately since it contains a special population, e.g., correctional facilities, dormitories, and group care homes. This group quarter's population does not utilize conventional housing units. They are not considered part of the household population that requires a housing unit. There are approximately 3,048 group quarters (college dormitories) housing the student population.

The UCSB Long Range Development Plan is undergoing an update. This plan outlines the potential for 5,000 additional student "beds" and 1,600 faculty and staff units but still needs to go through Coastal Commission approval. The plan also includes housing for the faculty, staff and student increase. The UCSB Long Range Development Plan includes \$28 million dollars worth of campus renovations and seismic upgrading as well as a \$28 million dollar dormitory addition.

The proposed LRDP has created some tension between UCSB and adjoining local agencies over the impacts of proposed growth on the adjacent agencies. The County of Santa Barbara and City of Goleta submitted an extensive letter of comment calling attention to off-campus impacts on traffic, resource use, housing demand, parking, public services, consistency with local plans, among other issues.

Chumash Indian Reservation

The Chumash Casino, Hotel, and Spa will likely continue to attract players and associated service related employment to the Santa Ynez Valley. The Santa Ynez Band of Chumash Indians is a significant employer in the Santa Ynez Valley with approximately 1,000 employees. The Bureau of Indian Affairs, (BIA), has agreed to allow the Chumash to annex 6.9 acres for a museum and cultural center, located across Highway 246 from the Chumash Casino. The Chumash plan a 3.5- acre commemorative park, a 14,350 square foot cultural center and museum, and a two-story commercial building with 27,600 square feet of space. The Chumash

have another request with BIA to annex a separate 5.81-acre parcel that is near the Casino and the Chumash recently purchased a 1,300 acre ranch in the Santa Ynez Valley.

Lompoc Federal Correctional Facility

The Lompoc Federal Correctional Facility in the City of Lompoc is a significant employer with approximately 800 bed spaces. Recently the facility had downgraded its security status from maximum to minimum security and reduced its workforce by 100.

A final related issue is described in our regions Clean Air Plan adopted by our local Santa Barbara County Air Pollution Control District. The APCD Plan clearly emphasizes the impact of offshore marine tankering on local on-shore air pollution and the importance of controlling this source to our local air quality.

In conclusion, SBCAG requests that ARB included an adjustment to our GHG reduction target to reflect the region's limited influence over the large institutions that impact overall passenger vehicle travel. Alternatively, ARB would accept an adjustment by SBCAG to account for these institutions in the development of our regions SCS?

Quantitative evaluation of the impacts of planning scenarios for SB375 GHG Emissions reduction target setting

The strategies selected by SBCAG for its target setting analysis were compiled from prior studies such as 101 In Motion, ongoing operations such as the Traffic Solutions TDM Flex Work and Van Pool programs, updated analysis of new broad proposals, and a few other examples of strategies that have been or are being analyzed. The focus of the evaluation is the assessment of these programs on lowering countywide vehicle trips, vehicle miles traveled, and, Greenhouse Gas emissions. Table 4 summarizes the scenarios:

Scenario A

Scenario A emphasizes reduction of vehicle miles travelled and system efficiency through the implementation of Transportation Demand Management and Systems Management measures. Such measures could include congestion relief at identified traffic bottlenecks, and expanding the vanpool, telecommuting, flex work, and other TDM programs.

Scenario B

Scenario B examines transit improvements and commuter friendly intercity rail between Ventura and Goleta to reduce vehicle trips in the region. This scenario also examines the benefits of an exercise conducted for 101 In Motion that evaluated the impacts of a change in land use on regional trips and VMT. The packaging of these results presents a foundation for future examination of the relationship between transit and transit supportive land use policies.

Scenario C

Scenario C examines pricing as a strategy to reduce the demand on the transportation system. 101 In Motion evaluated a toll lane option for Highway 101 and determined that it was infeasible. In addition, only one of eight cities in the County charges people to park their cars, so this package is rather thin. However, that city, which is Santa Barbara, is considering the use of parking charges to divert single occupant commuter

trips to other modes. This sample proposal is included to insure we look at a variety of approaches.

Summary evaluation of benefits of alternative scenarios

The individual measures and the benefits of the proposals are summarized in Table 5 and presented in narrative form below. All these measures, the assessment methodology, and their impacts on passenger car trips, vehicle miles traveled, and CO₂ are described in detail in the accompanying technical appendix. This Appendix also summarizes the guidelines established through the ARB and the MPO regional consultation process.

- Preliminary analyses of the alternative planning scenarios indicates that the potential of these measures to impact GHG reduction is relatively small (less than 1% of VMT and GHG reduction) for the 2035 horizon year, and even less for the 2020 interim year.
- Implementation of the State "Pavley" in-vehicle emission controls and the Low Carbon Fuel Standard (LCFS) gasoline standards will enable the SBCAG region to generate less passenger vehicle emissions in both 2020 and 2035 than were generated in 1990. This analysis is based on travel activity data from the SBCAG model run through the air quality emissions model, EMFAC, and the Pavley Post Processor distributed by ARB. These emission reductions dwarf savings from selected TDM, TSM, and other measures. While this analysis inherently assumes our existing vehicle fleet "turns over" to a newer, cleaner fleet, which may be optimistic given existing economic conditions, it does bode well for ongoing reductions in the contributions of passenger vehicles to CO₂ emissions.
- The parking pricing example has indicated significant potential to achieve GHG reduction benefits. However, since only three institutions in Santa Barbara County (the City of Santa Barbara, Santa Barbara City College, and UCSB) charge for parking, this alternative has limited applicability at this time for Santa Barbara County.
- The TDM alternative remains the best approach to reduce GHG emissions in the future since small changes in individual behavior can result in cumulative reductions in single occupant vehicle trips and vehicle miles traveled.
- While transit system improvements examined alone appear to have limited GHG reduction benefits, the analysis by other MPOs indicate the combination of supportive land uses and fare policy options can achieve beneficial results. The effect of changes in land use on future emissions tied to vehicle trips and Vehicle Miles traveled is yet to be determined and will be assessed during the development of the Sustainable Communities Strategy as part of SBCAG's response to SB-375.

SBCAG appreciates the cooperative spirit between ARB staff and the MPOs during this time. SBCAG staff will be available to respond to any questions raised by your staff. Feel free to contact me or my Deputy, Michael Powers if we can be of any assistance.

Sincerely,


Jim Kemp
Executive Director

Attachment: Preliminary Analysis of Alternative Greenhouse Gas Emission Reduction Strategies for the SBCAG Region, for Submittal to California Air Resources Board, May 20, 2010, SBCAG.

FN: SP-34-08

Table 1: Description of SBCAG Alternative Planning Scenarios for SB375 GHG Emissions Reduction Target Setting

Scenario Categories		Methodology	Level of Deployment	2009 RTP Baseline	Scenario A: TDM & TSM Alternative	Scenario B: TSI & Land Use Alternative	Scenario C: Pricing & Disincentives
Transportation Demand Management (TDM) and Transportation System Management (TSM)							
1	Rideshare, Individual Marketing, Flex Work (Telecommute, Vanpool)	Modify 101 IM Package Option in Model - Base trip reduction - 1085 trips reduction for each AM & PM period. Run model	Assumed an increase of 100% trip reduction as "ambitious but achievable" approach (from 1085 to 2170 trips for each peak period) for 2020 and 2035	1085 trips reduced for each AM and PM peak hour	Test		
2	Traffic Solutions: Commuter Challenge	Review and post process new/ongoing Commuter Challenge Programs for GHG benefits.	Assess all modes of transportation including bike trips as part of larger promotions such as "CycleMaynia" or bike month.	No	Test		
3	Traffic Solutions: Awareness Programs	Review and post process new/ongoing TS Awareness Programs for GHG benefits.	Assess effectiveness of dissemination of promotional information to the general public and employers throughout Santa Barbara County at address vehicle trip reduction.	No	Test		
4	Traffic Solutions: Dynamic Ridesharing	Review and post process new Dynamic Ridesharing Programs for GHG benefits.	Employ smart phone technology to enable real time instant carpool matching	No	Test		
5	Parking Pricing	Use CSMP results for 101 mainline to formulate approach. Post process	CSMP assumed a system-wide ramp metering in place on South Coast 101 where the right conditions exist. Queue spill-back detectors are assumed in operations in test sites.	No	Test		
6	Operational strategies: ITS, Signal Synchronization	Assumed signal synchronization in place to estimate GHG reduction benefits via 2035 travel flows and improved average speeds. Post process.	Assumed two potential arterial corridors on the South Coast for signal synchronization to estimate GHG reduction benefits. Post process	No	Test		
Transportation System Improvements and Land Use							
1	Expand transit system, transit station P&R Facilities	Double existing transit frequency and run model based on 2007 trunk and express. Post process expanded PnR facilities	Based on with 2007 transit system (2009 RTP), assumed new PnR facilities and project vehicle reduction using counts, field surveys.	Limited		Test	
2	Commuter Friendly Train Rail Service Expansion	Modify 101 IM "Commuter Rail" to "Expand Commuter Friendly Rail Service" both in each AM and PM periods, using the latest CSMP analysis on Commuter Friendly Rail Service Improvements assumptions	CSMP assumed a lower vehicle trips reduction than the 101 IM Study (from 385-285 trips reduction). By 2035, the original 101IM vehicle trip reduction is assumed based on new state supported trains.	385 trips reduced for each AM and PM period.		Test	
3	SubArea Redevelopment Pattern	Test lower employment growth rate and redevelopment pattern in the Goleta Area	Assumed higher household population and no vacant land devoted to housing and employment with job increases due to density at job sites, resulting in 75% less in employment.	No		Example	
Pricing and Disincentives							
1	Parking Pricing	Assess Parking Pricing Policy Options proposed in the Draft City of Santa Barbara (PlanSB). Post Process	Limit to draft City of Santa Barbara's (PlanSB) proposal	No			Example

Table 2: Summary GHG Emissions Reduction for 2035 Forecast and Alternative Planning Scenarios

2035 Forecast and Alternative Planning Scenarios	Methodology	Vehicle Trips	VMT (Pass. Veh.) 2/	Daily GHG Emissions Per Capita (lbs) (No Pavley Adj.)	Other Benefits
2005 Baseline (Modeled)	Model	1,331,802	10,798,463	22.24	
2035 Horizon Year (Modeled)	Model	1,663,729	12,978,262	22.62	
		Vehicle Trips Reduction	VMT Reduction (Pass. Veh.) 2/	Daily GHG Reduction per Capita (No Pavley Adj.)	Other Benefits
Scenario A: TDM / TSM					
1. 101 In-Motion (TDM Package Option)	Model	5,955	128,700	0.07	
2. Commuter Challenges	Post Process	615	13,545	Inclusive	
3. Traffic Solutions Awareness Programs	Post Process	144	3,180	Inclusive	
4. Dynamic Ridesharing	Post Process	249	5,187	Inclusive	
5. Bottleneck Relief - Ramp Metering	Post Process	NA	NA	NA	Reduce delays, increase safety
6. Operational - Signal Synchronization	Post Process	NA	NA	0.01	Reduce 2 tons GHG daily, reduce peak speeds & delays
CUMULATIVE		6,963	150,612	0.08	
Scenario B: TSI and Land Use					
1. Expand Transit System Services	Model	2,234	7,184	0.1	Increase 3,129 daily boardings
2. Expand Park-n-Ride Facilities	Post Process	551	26,737	Inclusive	
3. Expand Commuter-Friendly Train Rail Service	Model	Inclusive	Inclusive	Inclusive	
4. Land use (Employ't Reduction & Densification)	Post Process	NA	21,000	Inclusive	Reduce 2-7% veh. trips on 101 during peak hour.
CUMULATIVE		2,785	54,921	0.1	
Scenario C: Pricing and Disincentives					
1. Parking Pricing Case Study 3/	Post Process	28,762	172,000	0.32	
CUMULATIVE REDUCTION (A+B+C)		38,510	377,533	0.50	

1/ Based on SBCAG Modeled output and include XX trips

2/ Based on a 50/50% Split IXI approach and include 50% neighboring IXI VMT.

3/ Based on PlanSB Alt 2.